

APPENDIX A

("marked-up" claims, corresponding to those prior pending claims that have been amended herein)

1. A diagnostic or prognostic assay for cancer, comprising:
 - (a) obtaining a tissue sample from a test tissue;
 - (b) performing a methylation assay on DNA [derived] from the tissue sample, wherein the methylation assay determines the methylation state of a CpG dinucleotide within at least one [a DNA sequence of the DNA, and wherein the] DNA sequence [is a sequence] selected from the group consisting of sequences of SEQ ID NOS:34-38 [SEQ ID NOS:1-103], sequences having a nucleotide sequence at least 98% [90%] identical to sequences of SEQ ID NOS:34-38 [SEQ ID NOS:1-103], CpG island sequences associated with sequences of SEQ ID NOS:35-38 [SEQ ID NOS:1-103], and CpG island sequences associated with sequences having a nucleotide sequence at least 98% [90%] identical to sequences of SEQ ID NOS:35-38 [SEQ ID NOS:1-103], [and combinations thereof,] wherein a [the] CpG island sequence is associated with the sequence of a [the] particular SEQ ID NO if the CpG island sequence is a [that contiguous] sequence of genomic DNA that is contiguous in the genome with, and encompasses at least one nucleotide of the particular SEQ ID NO sequence, and wherein the particular SEQ ID NO sequence is itself a portion of a larger CpG island sequence that satisfies the criteria of having both a frequency of CpG dinucleotides corresponding to an Observed/Expected Ratio >0.6, and a GC Content >0.5; and

- (c) determining a diagnosis or prognosis based, at least in part, upon the methylation state of the CpG dinucleotide within the DNA sequence, wherein the determined methylation state is either hypermethylation or normal methylation, and wherein the cancer is bladder or prostate cancer.

2. (Amended) The diagnostic or prognostic assay of claim 1 wherein the DNA sequence is a sequence selected from the group consisting of CpG island sequences associated with sequences of SEQ ID NOS:35-38 [SEQ ID NOS:1-103], and CpG island sequences associated with sequences having a nucleotide sequence at least 98% [90%] identical to sequences of SEQ ID NOS:35-38 [SEQ ID NOS:1-103, and combinations thereof].

3. (Amended) The diagnostic or prognostic assay of claim 2 wherein the DNA sequence is a sequence selected from the group consisting of CpG island sequences associated with sequences of SEQ ID NOS:35-38 [2, 4, 6, 7, 9-16, 19, 20, 22-33, 35-43, 48, 51-55, 59, 60,

64, 71, 76, 78-81, 84 and 87-90, and combinations thereof].

4. (Amended) The diagnostic or prognostic assay of claim 1 wherein the methylation assay procedure is selected from the group consisting of MethyLight, MS-SNuPE, MSP, MCA, COBRA, and combinations thereof.

5. *Cancelled herein by applicants*

6. *Cancelled herein by applicants*

7. (Amended) A kit useful for the detection of a methylated CpG-containing nucleic acid comprising a carrier means containing one or more containers comprising:

(a) a container containing a probe or primer which hybridizes to any region of at least 12 nucleotides of a sequence selected from the group consisting of SEQ ID NOS:34-38 [SEQ ID NOS:1-103], and sequences having a nucleotide sequence at least 98% [90%] identical to sequences of SEQ ID NOS:34-38 [SEQ ID NOS:1-103]; and

(b) additional standard methylation assay reagents required to affect detection of methylated CpG-containing nucleic acid based, at least in part, on the probe or primer.

8. (Amended) The kit of claim 7, wherein the additional standard methylation assay reagents are standard reagents for performing a methylation assay from the group consisting of MethyLight, MS-SNuPE, MSP, MCA, COBRA, and combinations thereof.

9. (Amended) The kit of claim 7, wherein the probe or primer comprises at least [about] 12 [to 15] nucleotides of a sequence selected from the group consisting of SEQ ID NOS:34-38 [SEQ ID NOS:1-103], and sequences having a nucleotide sequence at least 98% [90%] identical to sequences of SEQ ID NOS:34-38 [SEQ ID NOS:1-103].

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10. (Amended) An isolated nucleic acid molecule comprising a methylated or unmethylated polynucleotide sequence selected from the group consisting of sequences of [SEQ ID NO:1, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:18, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:32,] SEQ ID NO:34, SEQ ID NO:37, SEQ ID NO:38 [, SEQ ID NO:42, SEQ ID NO:44, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:62, SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:74, SEQ ID NO:76, SEQ ID NO:82, SEQ ID NO:83, SEQ ID NO:84, SEQ ID NO:86, SEQ ID NO:90, SEQ ID NO:92, SEQ ID NO:97, and SEQ ID NO:100], and sequences having at least 98% sequence identity thereto.